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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,357	01/24/2002	Christopher F. O'Hare	A34871	2008

21003 7590 10/17/2003

BAKER & BOTTS  
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NEW YORK, NY 10112

EXAMINER

SINGH, SUNIL

ART UNIT	PAPER NUMBER
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3673

DATE MAILED: 10/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/057,357

Applicant(s)

O'HARE, CHRISTOPHER F.

Examiner

Sunil Singh

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Altemus '357 in view of Japanese document (2001-271363).

Altemus discloses a module comprising a concrete block (10), at least one through hole (14) which is partially filled with concrete (see col. 1 line 58; col. 2 line 36, col. 4 line 39), at least one projection (38), at least one recess (42). Altemus discloses the invention substantially as claimed.

However, Altemus is silent about his concrete column comprising a mixture which is specifically formulated for underwater placement.

Japanese document '363 teaches a concrete column comprising a mixture which is specifically formulated for underwater placement (see abstract, ✓ Fig. 3 and attached definition of "grout"). It would have been considered obvious to one of ordinary skill in the art to modify Altemus by using specifically formulated underwater placement concrete as taught by Japanese document for the concrete column disclosed by Altemus since such an arrangement would allow for a retaining wall to be built adjacent a river because concrete that is specifically formulated for underwater

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placement sets up faster and would not deteriorate rapidly when exposed to water.

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Makram '110 in view of Japanese document (2001-271363).

Makram discloses a module comprising a concrete block, at least one through hole which is partially filled with concrete (see Fig. 7, page 1 left col. Line 23, page 3 left col. Lines 38-70), at least one projection, at least one recess (see Figs. 1-3, 7). Makram discloses the invention substantially as claimed. However, Makram is silent about his concrete column comprising a mixture which is specifically formulated for underwater placement. Japanese document '363 teaches a concrete column comprising a mixture which is specifically formulated for underwater placement (see abstract, Fig. 3 and attached definition of "grout"). It would have been considered obvious to one of ordinary skill in the art to modify Makram by using specifically formulated underwater placement concrete as taught by Japanese document for the concrete column disclosed by Makram since such an arrangement would allow for a retaining wall to be built adjacent a river because concrete that is specifically formulated for underwater placement sets up faster and would not deteriorate rapidly when exposed to water.

4. Claims 1, 2, 6-10, 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altemus '357 in view of Karnas '489 or Suzuki '057 and Japanese document (2001-271363).

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Altemus discloses the invention substantially as claimed. However, Altemus is silent about his concrete block/module being used as artificial reef. Further, Altemus is silent about his concrete column comprising a mixture which is specifically formulated for underwater placement. Karnas and Suzuki both teach concrete block/module being used as artificial reef (see Figs. 1, 2 and 22 respectively). Japanese document '363 teaches a concrete column comprising a mixture which is specifically formulated for underwater placement (see abstract, Fig. 3 and attached definition of "grout"). It would have been considered obvious to one of ordinary skill in the art to modify Altemus and use his concrete block/module as an artificial reef as taught by either Karnas or Suzuki since such a structure would more effectively withstand tidal current meaning not topple over or move thus defeating its intended purpose. In addition it would have been considered obvious to one of ordinary skill in the art to modify Altemus by using specifically formulated underwater placement concrete as taught by Japanese document for the concrete column disclosed by Altemus since such an arrangement would allow for the reef to be formed in situ.

With regards to claim 7, Altemus (as modified by Karnas or Suzuki and Japanese document '363) is silent about the reinforcing rod being fiberglass. Reinforcing rods being made out of fiberglass are well known and old in the art (see US PAT. PUB. 2003/0009970). It would have been considered obvious to one of ordinary skill in the art to further modify the

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modified Altemus by making the reinforcing rods out of fiberglass since this would prevent rusting.

With regards to claims 9 and 10, Altemus (as modified by Karnas or Suzuki and Japanese document '363) is silent about his projections and recess being frustoconical and hemispherical in shape. Projections and their corresponding recesses being frustoconical and hemispherical in shape are well known and old in the art. It would have been considered obvious to one of ordinary skill in the art to modify the modified Altemus by making his projections and recesses frustoconical or hemispherical in shape since this is a mere design choice.

5. Claims 1, 3-5, 7, 9, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makram '110 in view of Karnas '489 or Suzuki '057 and Japanese document (2001-271363).

Makram discloses the invention substantially as claimed. However, Makram is silent about his concrete block/module being used as artificial reef. Further, Makram is silent about his concrete column comprising a mixture which is specifically formulated for underwater placement. Karnas and Suzuki both teach concrete block/module being used as artificial reef (see Figs. 1, 2 and 22 respectively). Japanese document '363 teaches a concrete column comprising a mixture which is specifically formulated for underwater placement (see abstract, Fig. 3 and attached definition of "grout"). It would have been considered obvious to one of ordinary skill in the art to modify Makram and use his concrete block/module as an

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artificial reef as taught by either Karnas or Suzuki since such a structure would more effectively withstand tidal current meaning not topple over or move thus defeating its intended purpose. In addition it would have been considered obvious to one of ordinary skill in the art to modify Makram by using specifically formulated underwater placement concrete as taught by Japanese document for the concrete column disclosed by Makram since such an arrangement would allow for the reef to be formed in situ.

With regards to claim 7, Makram (as modified by Karnas or Suzuki and Japanese document '363) is silent about the reinforcing rod being fiberglass. Reinforcing rods being made out of fiberglass are well known and old in the art (see US PAT. PUB. 2003/0009970). It would have been considered obvious to one of ordinary skill in the art to further modify the modified Makram by making the reinforcing rods out of fiberglass since this would prevent rusting.

With regards to claim 10, Makram (as modified by Karnas or Suzuki and Japanese document '363) is silent about his projections and recess being hemispherical in shape. Projections and their corresponding recesses being hemispherical in shape are well known and old in the art. It would have been considered obvious to one of ordinary skill in the art to modify the modified Makram by making his projections and recesses hemispherical in shape since this is a mere design choice.

***Response to Arguments***

6. Applicant's arguments filed 9/26/2003 have been fully considered but they are not persuasive. With regards to claim 11 applicant argues that both Altemus and Makram do not teach an artificial reef module. It should be noted that claim 11 calls for a module **for use in assembling an artificial reef** and therefore a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Applicant argues that the passageways of Altemus are for the installation of plumbing or electrical lines. Altemus clearly teaches that the passageways can be filled with reinforced rods or concrete or both (see col. 1 line 58; col. 2 line 36, col. 4 line 39).

7. Applicant's arguments with respect to claim 11 have been considered but are moot in view of the new ground(s) of rejection. Applicant argues that Altemus and Makram do not teach a concrete column comprising a mixture that is specifically formulated for underwater placement. The examiner agrees; however, Japanese document '363 teaches this feature.

8. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be

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established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the knowledge generally available to one of ordinary skill in the art would lead the skilled artisan to the brick/block art for making/forming an artificial reef wherein the artificial reef is made out of brick/block. It should be noted that a basement wall, a retaining wall and a fence all could be formed using the same brick/block while they are subjected to different forces. There are artificial reefs made out of tires; therefore one skilled in the artificial reef art would look to the tire art when improving an artificial reef made out of tire. Would applicant in this case argue that the "tire art" is non-analogous? The answer is no. Therefore since it is well known in the artificial reef art that artificial reefs are made out of brick/blocks, it makes it perfectly analogous for the skilled artisan to look to the brick/block art when making an artificial reef. Further evidence of looking to the brick/block art when forming an artificial reef is provided in the areas searched in US Patent to Karnas wherein the block/brick art US class 52 was searched while looking to make an artificial reef.

9. Applicant argues that the concrete in the through holes doesn't bond therein. This is not concurred with since both *Altemus* and *Makram* teach to fill

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their through holes with concrete such concrete would inherently bond therein.

Such bonding is clearly depicted in Figure 7 of the Makram reference.

**Conclusion**

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunil Singh whose telephone number is (703) 308-4024. The examiner can normally be reached on Monday through Friday 8:30 AM-5:00 PM.

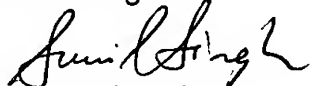
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on (703) 308-2978. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.

SS

October 15, 2003

Sunil Singh

  
Patent Examiner  
Art Unit 3673

rooving their minds with canna-  
ome joined or fitted by a groove  
nself intensely 4: to interact  
id rock ~ together — Benjamin

a. [1937]: MARVELOUS, WONDER-  
as interesting, enjoyable, not to

gropen, fr. OE *grōpan*; akin to  
feel about blindly or uncertainly  
h) 2: to look for something  
e right words) 3: to feel one's  
one's way) by groping — grope n

f F grosbec, fr. *gros* thick + bec  
tes of Europe or America having

hen [G] (1946) — see *schilling* at  
coarse texture (1869): a strong  
k or rayon and often with cotton

ick, coarse, fr. L *grossus* (14c) 1.  
(1): glaringly noticeable use,  
objectionableness (~ error) (2)

c: visible without the aid of a  
3: excessively fat b: growing or  
3 a: of, relating to, or dealing

tions b: consisting of an overall  
me) — compare NET 4: made up  
CORPORAL (the ~er part of human

s in taste: UNDISCRIMINATING 6  
NT. UNTUTORED 7 a: coarse in  
s: gravely deficient in civility or

a: scatological rather than a por-  
uxley) *syn* see COARSE, FLAGRANT

M 2: an overall total exclusive of  
n (an overall total) exclusive of de-  
-grosser n

grosser, fr. fem. of *gros* (14c): an  
pencil) f: anatomy that deals with the mag-  
ans

ne total value of the goods and ser-  
nation during a specified period (as

n [NL *Grossularia*, genus name of  
larit, fr. NL *Grossularia* (ca. 1847)

vn, or red garnet Ca<sub>2</sub>Al<sub>2</sub>(SiO<sub>6</sub>)<sub>2</sub>  
sine \grōsh\ n, pl groszy [Pol] (1949)

o) (1506): GROTTTO  
lt; MF, fr. OIt (*grotto*) *grottesca*, lit.  
a cave, fr. *grotto* grotto (1561) 1

erized by fanciful or fantastic human  
en with foliage or similar figures that  
uridity, ugliness, or caricature b: a

e that is grotesque 3: SANSERIF  
g to have the characteristics of  
HIZARRE b: absurdly incongruous or

natural, the expected, or the typical  
y adv — grotesque-ness n  
grō-tes-ka-rē\ n, pl -ries [grotesk]

ig that is grotesque 2: the quality  
QUEENESS

also grottos [It *grotta*, *grotto*, fr.  
CAVE 2: an artificial recess or grotto

ave  
if *grutch* (grudge) (1895) 1 a: a  
PLAIN (never nursed a ~ five months)

ally irritable or complaining  
-er-est (1895): given to grum-  
adv — grouchy-ness \che-nē\ n

grind; akin to OHG *grunt* *grunden*  
-12c) 1 a: the bottom of about

2: a ground coffee beans after being  
or argument (~ for complaint) (2)

mental logical condition (2) *grind*  
-rounding area: BACKGROUNDING

um 4 a: the surface of the earth  
purpose (parade ~) (fishing ~)

ig to a house or other building  
or as if in battle e: an arena  
a lot of ~ in his lecture) b: a

rock or formation through which  
object that makes an electrical con-  
ducting body (as the earth) and

circuit and as an arbitrary refer-  
a circuit a ground 7: a football  
ys — from the ground up

to-bottom: THOROUGHLY  
essary or tolerable: to ~  
-Newsweek) — off the ground

rogram never got off the ground  
g to or place on the ground

tion for (our fears about  
-K. Williams) b: to instruct  
rically with a ground: to ~

to throw (a football) into

ground to avoid being tackled for a loss ~ w 1: to have a ground or  
basis: RELY 2: to run around 3: to hit a grounder

ground past and past part of GRIND  
ground ball n (1942): a batted baseball that bounds or rolls along the  
ground

ground bass n (1699): a short bass passage continually repeated below  
constantly changing melody and harmony

ground-cherry \grāun(d)-cher-ē\ n (ca. 1839): a plant (genus *Phy-*  
*salis*) of the nightshade family with pulpy fruits in papery husks; also

the fruit of this plant  
ground cloth n (1931): a waterproof sheet placed on the ground for  
protection (as of a sleeping bag) against soil moisture

ground cover n (1900) 1: the small plants in a forest except young  
trees 2 a: a planting of low plants (as ivy) that covers the ground in

place of turf b: a plant adapted for use as ground cover  
ground crew n (1934): the mechanics and technicians who maintain  
and service an airplane

ground-effect machine n [fr. the support provided by the cushion of air  
as if the vehicle rode on the ground] (ca. 1966): a vehicle for traveling  
short distances that is supported above the surface of land or water by

a cushion of air produced by downwardly directed fans  
ground-er \grāun-dar\ n (ca. 1867): GROUND BALL  
ground-fish \grāun(d)-fish\ n (1856): a bottom fish; esp.: any of the  
commercially important fishes (as cod, haddock, pollack, flounder)

that live on the sea bottom  
ground floor n (1601): the floor of a house most nearly on a level with  
the ground — compare FIRST FLOOR

ground glass n (1848): glass with a light-diffusing surface produced by  
etching or abrading

ground-hog \grāund-hōg, -häg\ n (1784): WOODCHUCK  
Groundhog Day n [fr. the legend that the groundhog comes out and is  
frightened back into hibernation if he sees his shadow] (1871): Febru-

ary 2 that traditionally indicates six more weeks of winter if sunny or  
an early spring if cloudy

ground-ing \grāun-dīng\ n (1644): training or instruction in the funda-  
mentals of a field of knowledge

ground ivy n (15c): a trailing mint (*Nepeta hederacea*) with rounded  
leaves and blue-purple flowers

ground-less \grāun(d)-lās\ adj (1620): having no ground or foundation  
(~ fears) — ground-lessly adv — ground-less-ness n

ground-ling \grāun(d)-līng\ n (1602) 1 a: a spectator who stood in  
the pit of an Elizabethan theater b: a person of unsophisticated taste

2: one that lives or works on or near the ground  
ground loop n (1928): a sharp uncontrollable turn made by an airplane  
on the ground in landing, taking off, or taxiing

ground-mass \grāun(d)-mas\ n (1879): the fine-grained or glassy base  
of a porphyry in which the larger distinct crystals are embedded

ground meristem n (1938): the part of a primary apical meristem re-  
maining after differentiation of dermatogen and procambium

groundnut \grāun(d)-nāt\ n (1602) 1 a: any of several plants hav-  
ing edible tuberous roots; esp.: a No. American leguminous vine (*Apios*  
*nuberosa*) with pinnate leaves and clusters of brownish purple fragrant

flowers b: the root of a groundnut 2 chiefly Brit.: PEANUT  
ground-out \grāun(-dāt)\ n [grunder] (1965): a play in baseball in  
which a batter is put out after hitting a grounder to an infielder

ground pine n (1551) 1: a European bugle (*Asp. chamaeopitys*) with a  
resinous odor 2: any of several club mosses (esp. *Lycopodium clau-*  
*sum* and *L. complanatum*) with long creeping stems and erect branches

ground plan n (1731) 1: a plan of a floor of a building as distinguished  
from an elevation 2: a first or basic plan

ground rent n (1667): the rent paid by a lessee for the use of land esp.  
for building

ground rule n (1890) 1: a sports rule adopted to modify play on a  
particular field, court, or course 2: a rule of procedure (ground rules  
for selecting a superintendent — *Amer. School Board Jour.*)

ground-sel \grāun(d)-sāl\ n [ME *grundeswele*, fr. OE *grundeswele*, fr.  
ground + *swelan* to swallow — more at SWALLOW] (bef. 12c)

any of a large genus (*Senecio*) of composite plants with mostly yellow  
flower heads

ground-sill [ME *ground sille*, fr. *ground* + *sille* sill] (15c): a founda-  
tion timber

ground-sheet \grāun(d)-shēt\ n (1907): GROUND CLOTH  
ground speed n (1917): the speed (as of an airplane) with relation to the  
ground — compare AIRSPEED

ground squirrel n (1688): any of various burrowing rodents (as of the  
genus *Citellus*) that are related to the squirrels and that live in colonies

in open areas, often damage crops, and include vectors of plague  
ground state n (1926): the energy level (as of a system of interacting  
elementary particles, an atomic nucleus, or an atom) having the least  
energy of all the possible states — called also ground level

ground stroke n (1895): a stroke made (as in tennis) by hitting a ball  
that has rebounded from the ground — compare VOLLEY

ground substance n (1882): a more or less homogeneous matrix that  
forms the background in which the specific differentiated elements of a  
tissue are suspended: a: the intercellular substance of tissues — b:

ground swell n (1818) 1: a broad deep undulation of the ocean caused  
by a distant gale or seismic disturbance 2: a rapid spontane-  
ous growth (as of political opinion) (public ground swell of support for

ground-water \grāun,-dwōt,-or, -dwāt\ n (1890): water within the  
ground that supplies wells and springs; *specif*: water in the part of the  
ground that is wholly saturated

ground wave n (1925): a radio wave that is propagated along the sur-  
face of the earth

ground-work \grāun,-dwōt\ n [ground] (1917): wood, ground up and  
make pulp for paper

ground-work \grāun,-dwōt\ n (15c): FOUNDATION, BASIS (a plan that  
serves as the ~ for a bold new program)

uals assembled together or having some unifying relationship b: an  
assemblage of objects regarded as a unit c (1): a military unit con-

sisting of a headquarters and attached battalions (2): a unit of the  
U.S. Air Force higher than a squadron and lower than a wing 3 a

U.S. Air Force higher than a squadron and lower than a wing 3 a  
U.S. Air Force higher than a squadron and lower than a wing 3 a

an assemblage of related organisms — often used to avoid taxonomic  
connotations when the kind or degree of relationship is not clearly

defined b (1): two or more atoms joined together or sometimes a  
single atom forming part of a molecule; esp.: FUNCTIONAL GROUP (a

single atom forming part of a molecule; esp.: FUNCTIONAL GROUP (a  
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